Amendment to the Claims

Please replace all previous versions of the claims with the following listing:

Claims 1-26 (Canceled)

27. (New) A magnetic field sensor comprising a Hall element comprising a first contact, a second contact, a third contact and a fourth contact arranged in this sequence along a straight line on a surface of a first well of a first conductivity type that is embedded in a substrate of a second conductivity type, said four contacts being two inner contacts and two outer contacts, a first of said two outer contacts and a first of said two inner contacts for supply and discharge of a current flowing through the first Hall element, wherein the first of said two outer contacts and the first of said two inner contacts are not adjacent contacts, and a second of said two outer contacts and a second of said two inner contacts for tapping a first Hall voltage, wherein the two inner contacts are the same width and wherein the two outer contacts are the same width, wherein a distance between the first contact and the second contact is equal to a distance between the third contact and the fourth contact, wherein a distance between the second contact and the third contact is selected such that approximately $R_1 = R_2 = R_3$ wherein R_1 denotes a resistance prevailing between the first contact and the second contact, R_2 denotes a resistance prevailing between the second contact and the third contact and R_3 denotes a resistance prevailing between the third contact and the fourth contact, and wherein the two outer contacts are connected via an additional resistor having a resistance R_5 that is selected such that approximately $R_1 = R_2 = R_3 = R_4 || R_5$ wherein R_4 denotes a resistance prevailing between the first contact and the fourth contact.

28. (New) The magnetic field sensor according to claim 27, wherein said additional resistor is formed by an additional well of the first conductivity type embedded in said substrate.

29. (New) The magnetic field sensor according to claim 27, wherein a fifth contact is arranged in the well of the Hall element next to the first contact of the Hall element on a side facing an adjacent edge of the well and wherein the fifth contact is connected to the fourth contact by a conductor path, so that said additional resistor is formed by a resistance prevailing between the first contact and the fifth contact.

30. (New) The magnetic field sensor according to claim 27, wherein a fifth contact is arranged in the well of the Hall element next to the first contact of the Hall element on a side facing an adjacent edge of the well, that a sixth contact is arranged in the well of the Hall element next to the fourth contact of the Hall element on a side facing an adjacent edge of the well and wherein the fifth contact is connected to the sixth contact by a conductor path, so that said additional resistor is formed by a resistance prevailing between the first contact and the fifth contact and a resistance prevailing between the sixth contact and the fourth contact.

31. (New) The magnetic field sensor according to claim 27, wherein at least one electrode electrically insulated from the well is arranged between two contacts.

32. (New) The magnetic field sensor according to claim 28, wherein at least one electrode electrically insulated from the well is arranged between two contacts.

33. (New) The magnetic field sensor according to claim 29, wherein at least one electrode electrically insulated from the well is arranged between two contacts.

34. (New) The magnetic field sensor according to claim 30, wherein at least one electrode electrically insulated from the well is arranged between two contacts.

35. (New) The magnetic field sensor according to claim 27, wherein a doping of the well in an area between the two inner contacts is different to a doping of the well in the areas between an inner contact and an outer contact.

36. (New) The magnetic field sensor according to claim 28, wherein a doping of the well in an area between the two inner contacts is different to a doping of the well in the areas between an inner contact and an outer contact.

37. (New) The magnetic field sensor according to claim 29, wherein a doping of the well in an area between the two inner contacts is different to a doping of the well in the areas between an inner contact and an outer contact.

38. (New) The magnetic field sensor according to claim 30, wherein a doping of the well in an area between the two inner contacts is different to a doping of the well in the areas between an inner contact and an outer contact.

39. (New) A magnetic field sensor comprising

a first Hall element comprising a first contact, a second contact, a third contact and a fourth contact arranged in this sequence along a first straight line on a surface of a first well of a first conductivity type that is embedded in a substrate of a second conductivity type, said four contacts being two inner contacts and two outer contacts, a first of said two outer contacts and a first of said two inner contacts for supply and discharge of a current flowing through the first Hall element, wherein the first of said two outer contacts and the first of said two inner contacts are not adjacent contacts, and a second of said two outer contacts and a second of said two inner contacts for tapping a first Hall voltage, wherein the two inner contacts are the same width and wherein the two outer contacts are the same width, wherein a distance between the first contact and the second contact is equal to a distance between the third contact and the fourth contact,

a second Hall element comprising a first contact, a second contact, a third contact and a fourth contact arranged in this sequence along a second straight line on a surface of a second well of the first conductivity type that is embedded in the substrate, said four contacts being two inner contacts and two outer

contacts, a first of said two outer contacts and a first of said two inner contacts for supply and discharge of a current flowing through the second Hall element, wherein the first of said two outer contacts and the first of said two inner contacts are not adjacent contacts, and a second of said two outer contacts and a second of said two inner contacts for tapping a second Hall voltage, wherein the two inner contacts are the same width and wherein the two outer contacts are the same width, wherein a distance between the first contact and the second contact is equal to a distance between the third contact and the fourth contact,

wherein the first and second straight line run in parallel, and

wherein either the first contact of the first Hall element is connected with the fourth contact of the second Hall element, the second contact of the first Hall element is connected with the first contact of the second Hall element, the third contact of the first Hall element is connected with the second contact of the second Hall element and the fourth contact of the first Hall element is connected with the third contact of the second Hall element or
the first contact of the first Hall element is connected with the second contact of the second Hall element, the second contact of the first Hall element is connected with the third contact of the second Hall element, the third contact of the first Hall element is connected with the fourth contact of the second Hall element and the fourth contact of the first Hall element is connected with the first contact of the second Hall element.

40. (New) The magnetic field sensor according to claim 39,
wherein a distance between the second contact and the third contact of the first Hall element is selected such that approximately $R_1 = R_2 = R_3$ wherein R_1 denotes a resistance prevailing between the first contact and the second contact of the first Hall element, R_2 denotes a resistance prevailing between the second contact and the third contact of the first Hall element and R_3 denotes a resistance prevailing between the third contact and the fourth contact of the first Hall element,
wherein the two outer contacts of the first Hall element are connected via a first additional resistor having a resistance R_5 that is selected such that approximately $R_1 = R_2 = R_3 = R_4 || R_5$ wherein R_4 denotes a resistance prevailing between the first contact and the fourth contact of the first Hall element,

wherein a distance between the second contact and the third contact of the second Hall element is selected such that approximately $R_1' = R_2' = R_3'$ wherein R_1' denotes a resistance prevailing between the first contact and the second contact of the second Hall element, R_2' denotes a resistance prevailing between the second contact and the third contact of the second Hall element and R_3' denotes a resistance prevailing between the third contact and the fourth contact of the second Hall element, and

wherein the two outer contacts of the second Hall element are connected via a second additional resistor having a resistance R_5' that is selected such that approximately $R_1' = R_2' = R_3' = R_4' \,||\, R_5'$ wherein R_4' denotes a resistance prevailing between the first contact and the fourth contact of the second Hall element.